

# Improving Outpatient Services - The Value of Information

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The quality of care delivered in outpatient clinics is influenced by many factors, not least the optimum management of time. This submission reports how the ability to analyse detailed patient data has enabled monitoring and improvement of the clinical service provided in a busy gastroenterological practice.

Clinical, administrative and demographic data have been collected on 2,000 consecutive patients referred to a specialist gastroenterology clinic in a busy general hospital in the UK. 15,000 items of clinical data have been recorded and analysed.

Analysis of outpatient visits by diagnosis has identified the five disorders which are most commonly referred, and the median number of follow-up visits each requires. Irritable bowel syndrome, gastro-oesophageal reflux and dyspeptic disorders tend to be seen only once. Ulcerative colitis and Crohn's disease tend to remain under follow-up long-term (median 4 and 6 visits respectively over 5 years).

Analysis of referral patterns of patients with irritable bowel syndrome has shown considerable variation in referring practice, both from primary and secondary care. A significant proportion are referred initially to other specialists, particularly surgeons and gynaecologists, with considerable variation as to whether tertiary referral occurs.

Discussion with primary care doctors (GPs), aided by agreed algorithms to guide initial management, has reduced the number of referrals, and enabled return back to the care of GPs many patients who would otherwise have remained under secondary care. This rationalisation of initial referral and shared care has led to an encouraging fall in the time patients spend waiting for an appointment (a widespread problem in the UK) from 9 to 2 months.

Not all patients, however, can be easily managed in primary care. Crohn's disease and ulcerative colitis are examples of chronic relapsing conditions, where the course is unpredictable. An analysis of the growth in demand for outpatient appointment time to follow up patients with these disorders has demonstrated that, if current trends continue, saturation of available appointment slots will occur

within the next five years. This emphasises the need to transfer as many patients as possible back to the care of GPs.

To do this with confidence, a prediction of outcome is needed. We have monitored the disease activity of these disorders over time for all our patients, and demonstrated how this fluctuates. We are creating a detailed, coded knowledge base of clinical features, built upon the progress of real patients, so that we will in time be able to predict who is likely to do well, and can be discharged back to primary care with confidence.

Devolution of specialist care into the community is fashionable at present in the UK. The ability to identify which patients are seen, investigated briefly and discharged, has enabled prediction of the likely impact of open access services, and the creation of clinical guidelines for referral. For example, patients with gastro-oesophageal reflux or dyspepsia comprise a third of total referrals for an out-patient opinion, but only half of these are considered by the specialist to require endoscopy. Guidelines and monitoring are needed to ensure that patients are not inappropriately endoscoped via an open access service.

The length of time patients spend in their first consultation ranges from 10 to 30 minutes (median 19 min). The consultation takes an average of six minutes longer if a rigid sigmoidoscopy is performed. Patients with functional disorders (such as irritable bowel syndrome and non-ulcer dyspepsia) take five minutes longer than those with organic disease. This information enables more rational allocation of consultation times according to presenting complaint.

These data have been captured using a generic Clinical Information System (GeneCIS), which is currently under development at the School of Postgraduate Studies in Swansea. The generic concept aims to ensure that information is patient focused, rather than merely provider or carer based. Relevant data can be collected on all aspects of a patient's transit through care (during any period of illness), and progress can be monitored over time. GeneCIS is intended to support the broad spectrum of clinical care, and is currently in use in gastroenterology, urology and elderly care.